

## **Advanced Nuclear Concepts Course**

*Internet Address*  
<http://cpc.au.af.mil/>

**Mission.** Provide education and research on the nuclear enterprise and Weapons of Mass Destruction (WMD) threats and appropriate countermeasures to AF and DoD leaders.

**Program Description.** The course provides an in-depth look at key aspects of the Air Force nuclear enterprise to enable better understanding of nuclear deterrence history, theory, and application; nuclear operations policy and strategy; nuclear incident/accident response; and nuclear surety and effects.

**Learning Outcome.** Provide an in-depth study of the U.S. nuclear enterprise that will allow core nuclear Airmen to assume leadership/HHQ positions dealing with the implementation of nuclear policy, management of the nuclear enterprise and execution of strategic deterrence operations.

**Faculty.** The qualifications for faculty include extensive backgrounds in the Air Force nuclear enterprise (nuclear operations (e.g., ICBM/Bomber operations), nuclear security forces, missile and nuclear weapons maintenance, arms control, weapons systems acquisition, and/or policy development) to provide the professional functional expertise. The course uses adjunct professors, visiting instructors and subject-matter experts from the Air University (AU), National Nuclear Security Administration (NNSA) and the National Nuclear Laboratories (e.g., Sandia National Lab (SNL), Lawrence Livermore National Lab (LLNL), and Los Alamos National Lab (LANL) , Air Force Nuclear Weapons Center (AFNWC), Headquarters Air Staff, Defense Threat Reduction Agency (DTRA), Air Force Global Strike Command (AFGSC), and United States Strategic Command (USSTRATCOM) to provide specific academic focus on nuclear topics. In addition, a retired Air Force General Officer with extensive experience in the Air Force Nuclear enterprise serves as an in-resident Senior Mentor for each class.

**Duration.** 5 days.

**Eligibility.** E8-E9, O4-O6, Civilian equivalent core nuclear Airmen assigned to squadron/group leadership positions or occupying HAF/NAF, MAJCOM/COCOM/Joint Staff billets at the AO/Branch Chief level with nuclear operations, maintenance, logistics, support, or acquisition responsibilities within the nuclear enterprise. DoD Secret security clearance with Restricted Data (RD) and Critical Nuclear Weapons Design Information (CNWDI) access is required for the course.

Reference the Education and Training Course Announcements (ETCA) web

site at <https://etca.randolph.af.mil> for additional information. ETCA course number: MNUC300.

**Completion Requirement.** Students must complete the following 40-hours in-resident program and demonstrate satisfactory understanding of the Air Force Nuclear Enterprise by successfully completing the end of course exercise to graduate.

#### Syllabus

MNUC300 Learning Areas	Contact Hours
Nuclear Enterprise Issues	7
Nuclear Weapons Basics/Use Control/Safety Design/Effects	8
Nuclear Policy/Strategy/Nuclear Deterrence Operations (NDO)	12
Nuclear Stockpile Management/Nuclear Command and Control	8
Nuclear Security/Nuclear Incident Response	5

#### Course Description

##### **MNUC300 Advanced Nuclear Concepts Course**

##### **40 Contact Hours**

The major areas of instruction cover nuclear history and lifecycle, nuclear effects, nuclear surety, nuclear command and control, nuclear policy/strategy/deterrence theory, the U.S. Nuclear Enterprise, nuclear accident/incident response, and stockpile maintenance and sustainment. These subjects are essential for individuals who are at the 9+ year point working in the Air Force Nuclear Enterprise and the course is designed to enhance awareness of the USAF's nuclear mission among core nuclear Airmen occupying or moving into Wing/Squadron leadership and /or HHQ staff positions who deal with the implementation of nuclear policy, management of the nuclear enterprise and execution of nuclear deterrence operations. Facilitated discussions and exercises are designed to enhance student critical thinking on 21<sup>st</sup> Century nuclear deterrence operations issues. Attendees receive updates on current Air Staff/DoD/DOE nuclear policy and procedures. This course is taught 4 times per year at Kirtland AFB, NM. This education is a primary component of the Chief of the Air Force's vision to strengthen the Air Force nuclear enterprise.